



# UNITED STATES PATENT AND TRADEMARK OFFICE

*adn*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,985	11/02/2001	Richard H. Garrett	FCI-2648/C3193	3493
7590	06/29/2004		EXAMINER	
Woodcock Washburn LLP 46th Floor One Liberty Place Philadelphia, PA 19103			JONES, STEPHEN E	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/015,985	<b>Applicant(s)</b> GARRETT ET AL.	
	<b>Examiner</b> Stephen E. Jones	<b>Art Unit</b> 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 8-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

The indicated allowability of claims 1-4 and 8-10 is withdrawn in view of the newly discovered reference(s) to Schwartz et al., and Negley. Rejections based on the newly cited reference(s) follow.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "the a spacer" is not clear as to whether it is describing the previously recited spacer or an additional spacer element and thus renders the claim vague and indefinite.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(f) he did not himself invent the subject matter sought to be patented.

4. Claims 1-4 and 8-14 (insofar as Claim 14 could be understood) are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter.

The co-pending application No. 10/273,410 appears to include the same subject matter as the present invention but does not include inventor Richard H. Garrett.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Devaux et al. in view of Lunsford (both of record).

Devaux et al. teaches a transmission line strip structure which is surrounded by air (i.e. a lead frame). The line (i.e. a high speed interconnection system since the device is for microwave frequencies) is supported by dielectric support sections (2). A

ground plate/backplane (3) is provided at the bottom and a ground plane (4) is provided at the top. The line has minimized disturbance of propagation (i.e. it is impedance matched since reflections, which are a result of impedance mismatch, are a type of disturbance which is associated with transmission lines, and Devaux is teaching minimizing disturbance which inherently would include the ground plate being a predetermined distance from the line to provide the desired impedance to thus provide for the impedance match since the distance to ground is a fundamental variable in the impedance of a transmission line) (see Col. 1, lines 32-37). Also, the opening in the spacer which holds the line can be considered a "groove" in the terms broadest meaning (Claim 13).

However, Devaux does not explicitly teach that the structure includes a plurality of transmission lines and that the spacer maintains the lines a distance from each other (Claims 11-12)

Lunsford provides the general teaching of multiple conductor lines that have round cross-sections.

It would have been considered obvious to one of ordinary skill in the art to have substituted a plurality of round transmission lines such as taught by Lunsford in place of the flat conductors in the Devaux structure, because the additional lines would have provided the advantageous benefit of interconnections for a pre-selected quantity of devices or additional devices, and the substitution of well-known round cross-section lines (such as taught by Lunsford) would have been a mere selection art-recognized equivalent/alternative conductive transmission line means.

8. Claims 1-4, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Devaux et al. (of record) in view of Lunsford (of record) and Schwartz et al.

Devaux et al. teaches a transmission line strip structure which is surrounded by air (i.e. a lead frame). The line (i.e. a high speed interconnection system since the device is for microwave frequencies) is supported by dielectric support sections (2) (Claim 4). A ground plate/backplane (3) is provided at the bottom and a ground plane (4) is provided at the top. The line has minimized disturbance of propagation (i.e. it is impedance matched since reflections, which are a result of impedance mismatch, are a type of disturbance which is associated with transmission lines, and Devaux is teaching minimizing disturbance which inherently would include the ground plate being a predetermined distance from the line to provide the desired impedance to thus provide for the impedance match since the distance to ground is a fundamental variable in the impedance of a transmission line) (see Col. 1, lines 32-37) (Claim 2).

However, Devaux does not explicitly teach that the structure includes a plurality of transmission lines, a housing having a base adapted to securely receive the cover and the cover and base are non-conductive material (Claims 1, 3), that the lines have a round cross-section (Claim 10), or that signal tabs are connected to ends of the lines which are adapted to be connected to an electrical system (Claim 8).

Schwartz teaches that a nonconductive housing structure can have a cover (42) and a support structure including a circuit board (17). The circuit board and base structure receives the cover, and the circuit board can have conductor leads with signal tabs for making connections between the circuit board and a board that the structure is mounted upon (e.g. see Figs. 2-9 and Col. 8, lines 1-68 and Col. 9, lines 66-68).

Lunsford provides the general teaching of multiple conductor lines that have round cross-sections.

It would have been considered obvious to one of ordinary skill in the art to have substituted a plurality of round transmission lines such as taught by Lunsford in place of the flat conductors in the Devaux structure, because the additional lines would have provided the advantageous benefit of interconnections for a pre-selected quantity of devices or additional devices, and the substitution of well-known round cross-section lines (such as taught by Lunsford) would have been a mere selection art-recognized equivalent/alternative conductive transmission line means.

It would have been considered obvious to one of ordinary skill in the art to have provided a housing including a circuit board and signal tabs such as taught by Schwartz for the Devaux/Lunsford combination transmission lines, because the housing would have provided the advantageous benefit of a means for physical and electrical protection from unwanted external influences, and the inclusion of the circuit board and signal tabs (such as taught by Schwartz) also would have provided the advantageous benefit of a means for mounting the Devaux/Lunsford device such that the signal lines

could easily be connected to another circuit or system on an additional substrate via the signal tabs (such as suggested by Schwartz (e.g. see Col. 8, lines 1-8)), thereby suggesting the obviousness of such a modification.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Devaux et al. (of record), Lunsford (of record), and Schwartz et al. as applied to claims 1-2 above, and further in view of Negley.

The combination of Devaux, Lunsford, and Schwartz teaches a transmission line structure as described above.

However, the combination does not explicitly teach that at least one ground tab is provided for connecting the ground plane to ground.

Negley teaches the well-known concept of using a solder tab to make a ground connection (e.g. see Col. 2, lines 50-56).

It would have been considered obvious to one of ordinary skill in the art to have included a solder tab (such as taught by Negley) from the ground plane to connect to ground in the Devaux/Lunsford/Schwartz device, because it would have been a well-known means for providing a common ground potential between the transmission line and other grounded circuitry which the transmission line is connected, thereby suggesting the obviousness of such a modification.

### ***Double Patenting***

10. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re*



Art Unit: 2817

*Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

11. Claim 1 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1, 5, 6, and 7 of copending Application No. 10/273,410. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 1-4 and 8-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 8-10 of copending Application No. 10/273,410. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art to have included a cover and base to the co-pending claimed subject matter of claims 1-4 and 8-10, especially since co-pending

Art Unit: 2817

claims 6-7 teach a non-conductive cover and base, and the inclusion of a well-known cover and base would have provided the advantageous benefit of a physical protection means (from outside disturbances) for the transmission line system.

Also, regarding Claims 11-12, obviously the spacers of the co-pending claims maintain the lines a chosen distance apart since the lines are maintained in a fixed location by the spacers.

14. Claim 13 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 8-10 of copending Application No. 10/273,410 in view of Devaux et al. (of record).

The co-pending claims (including the obviousness portions of the double patenting rejection above) teach all of the limitations of the present claim 13 except that the spacer includes a groove for each line.

Devaux teaches using a groove as described in the above art rejections.

It would have been considered obvious to one of ordinary skill in the art to have included a groove in the spacer (such as taught by Devaux) in the co-pending claim structure because it would have provided the advantageous benefit of a stable securing means for transmission lines.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Response to Arguments***

15. Applicant's arguments filed 4/7/04 have been fully considered but they are not persuasive.

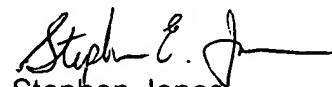
Applicant argues that Devaux does not teach that the spacers maintain the plurality of lines at a distance from the ground and from each other a second distance.

Applicant's argument is not convincing since Applicant appears to be arguing the Devaux reference alone rather than the combination of Devaux and Lunsford. The combination of lines such as taught by Lunsford with the structure including spacers in the Devaux device clearly would have resulted in the lines being spaced apart a distance based on a chosen mounting position.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 571-272-1762. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Stephen Jones  
Patent Examiner  
Art Unit 2817

SEJ